

2008 Light 2

1. What is the speed of x-rays?
2. If the moon is approximately 384,000,000 m from the earth, how long did it take the radio signals from the Apollo moon lander to reach the earth?

3. What is the wavelength of FM radiowaves of 101 MHz?

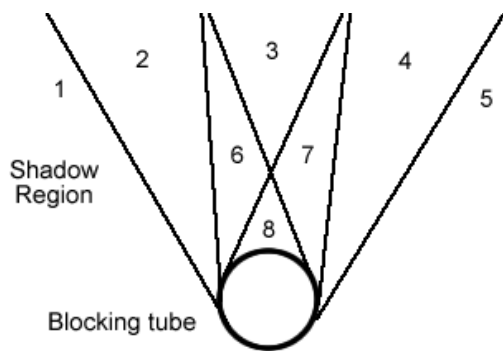
4. What is the frequency of yellow-green light that has a 560 nm wavelength?

5. What part of the electromagnetic spectrum has the least amount of energy?

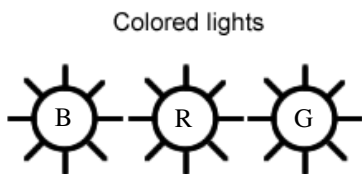
6. When we used the phosphorus pad...
 - A. What color did the pad glow (be specific)?
 - B. Which color made the pad glow brighter: red or blue?
 - C. Why?
 - D. How did the color of the pad change as the light hitting it changed?
 - E. Why?

If you need the help: go to the study help light links and use the color box.

7. When using the RGB color model,
 - A. Is RGB lights or paints?
 - B. How would you make red?
 - C. What color is always the background for RGB?
 - D. How would you make white?
 - E. How would you make yellow?
 - F. How would you make black?
 - G. How would you make magenta?



8. The graphic at the left depicts what we did with the three colored lights. To help you with the following questions you might want to label the diagram as you go.
 - A. _____ In which region is green blocked?
 - B. _____ In which region is blue blocked?
 - C. _____ In which region is red blocked?
 - D. _____ Which region is magenta?
 - E. _____ Which region is cyan?
 - F. _____ Which region is yellow?
 - G. _____ Which region is white?
 - H. _____ Which region is black?
 - I. _____ Which region is blue?



9. If you are using the CMYK model for making color:
 - A. Is CMYK paints or lights?
 - B. What color is the background?
 - C. How would you make Red?
 - D. How would you make Cyan?
 - E. What are the two ways to make black?
 - F. What is the most economical way to make black?
 - G. How would you make Blue?

2008 Light 2

10. White light shines on a yellow object.
A. What color light reflects off of the object?
B. What color is absorbed by the object?

11. What color does cyan absorb?

12. White light goes thru a magenta and cyan filter.
A. What light gets thru the magenta filter?

B. What light gets thru the cyan filter?

13. If you look at a blue object thru green glasses,
A. What color does it look like?
B. Why?

Bellwork:

14. How does a virus seem alive?

15. Is it?

16. Why?

17. Which characteristic of life does the following exhibit?

A. You shine light on an object and it moves away.

B. You are looking at a substance thru a microscope and notice what seem like little “boxes” that are regular in shape and occurrence.

C. After a few days you come back and find that your sample has doubled.

